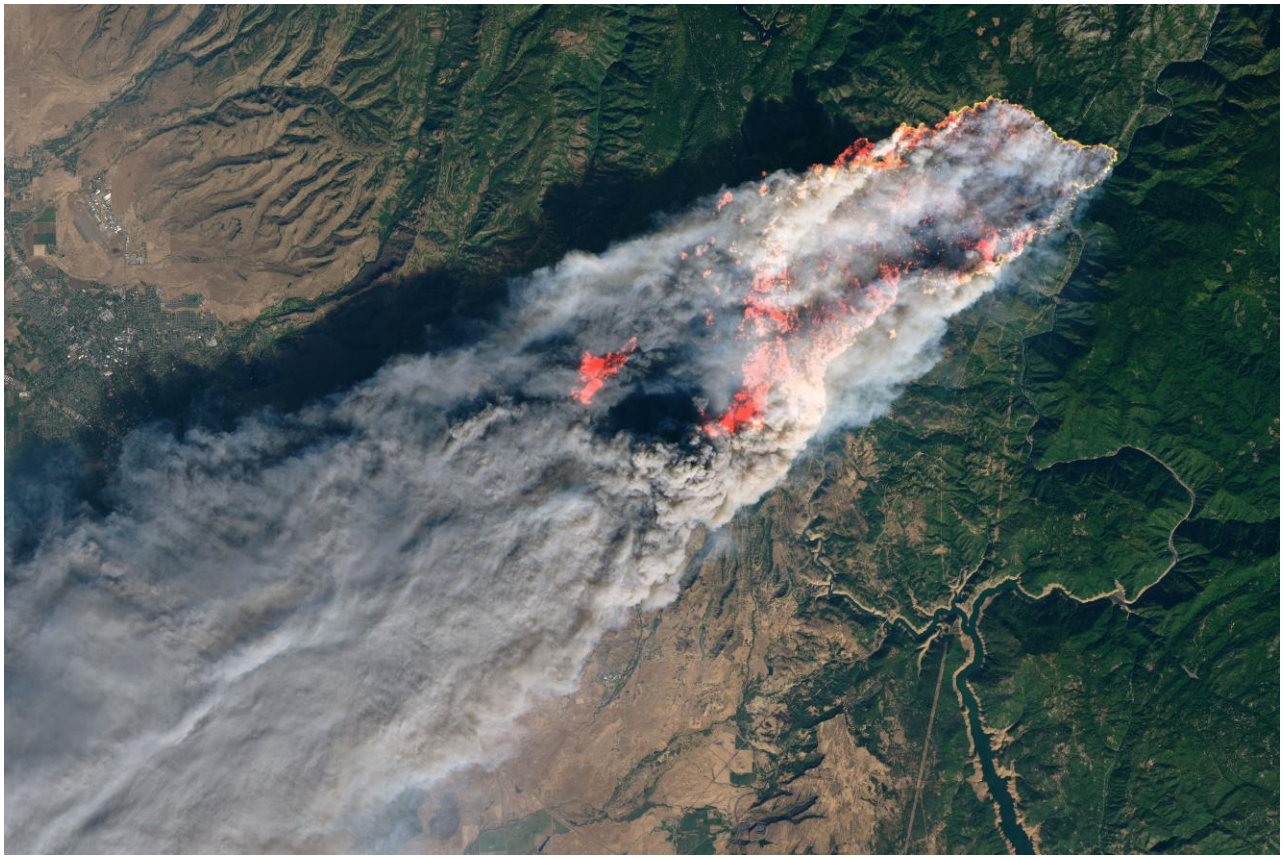
National Interagency Coordination Center

Wildland Fire Summary and Statistics Annual Report 2018



Camp Fire, California

National Interagency Coordination Center

Table of Contents

Identifier Legend

Interagency Coordination Centers

NICC – National Interagency Coordination Center
AK - Alaska
EA - Eastern Area
GB - Great Basin
NO - Northern California
NR - Northern Rockies
NW - Northwest
RM - Rocky Mountain
SA - Southern Area
SO - Southern California
SW - Southwest
CIFFC - Canadian Interagency Forest Fire Centre

Government Agencies

Department of the Interior:
BIA - Bureau of Indian Affairs
BLM - Bureau of Land Management
FWS - Fish & Wildlife Service
NPS - National Park Service
AMD - Aviation Management Directorate

Department of Agriculture:
FS – USDA Forest Service

Department of Defense: DOD or **DDQ**

Department of Homeland Security:
FEMA - Federal Emergency Management Agency
ESF #4 – Emergency Support Function 4, Firefighting

Department of Commerce:
WXW - National Weather Service

Department of Energy: DOE

ST – State
ST/OT – State and Other combined
OT – Other
PRI – Private
CNTY – County
CN – Canada
AU – Australia
NZ – New Zealand

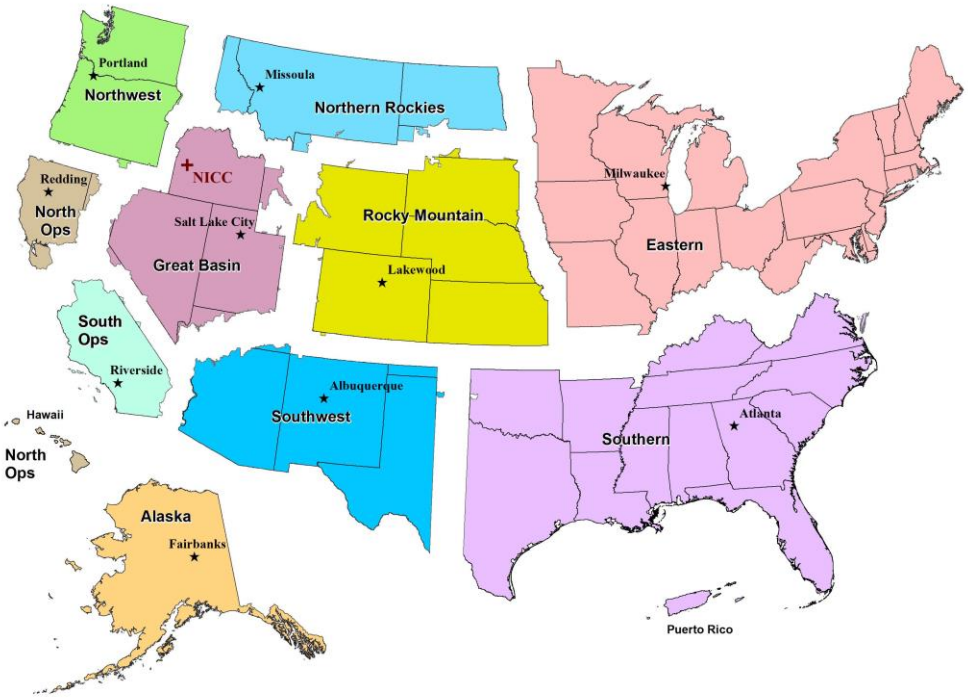
Preface

Statistics used in this report were gathered from the interagency Fire and Aviation Management Web Applications (FAMWEB) system, which includes the Situation Report and Incident Status Summary (ICS-209) programs. Previous National Interagency Coordination Center (NICC) annual reports and other sources were also used in this document. The statistics presented here are intended to provide a national perspective of annual fire activity, but may not reflect official figures for a specific agency. The statistics are delineated by agency and Geographic Area. Pie chart figures are rounded to the nearest whole percentage point. This document is available electronically at the National Interagency Coordination Center web page: http://www.predictiveservices.nifc.gov/intelligence/intelligence.htm.

For agency-specific details or official data contact the individual agency.

Resource mobilization statistics used in this report were gathered from the interagency Resource Ordering and Status System (ROSS), which tracks tactical, logistical, service and support resources mobilized by the national incident dispatch coordination system. Statistics presented in this report are the resources requested by one of the ten Geographic Area Coordination Centers and processed through NICC. Requests by FEMA are placed to NICC through Emergency Support Function (ESF) #4 (Firefighting). The resource ordering process and procedures may be found in the National Mobilization Guide. The National Mobilization Guide can be found on the NICC web site (www.nifc.gov/news/nicc.html) under reference materials.

Geographic Area Coordination Centers



National Interagency Coordination Center

2018 Fire Season Summary

Winter (December 2017 – February 2018)

The winter began with temperatures generally below average across the Great Plains and the East. Temperatures across the West were mostly above average. With a cold, deep trough in place over the East long duration cold events were common, especially across the Great Lakes region and New England. A persistent high pressure ridge over the Southwest produced temperature anomalies that were between 3 and 9 degrees above average in December and January. A pattern shift occurred in February that allowed for a trough to become established over the Great Plains and a ridge to develop over the eastern states. This produced a cooling trend across the western two thirds of the country and a warming trend across the East.

Precipitation trends in December were generally well below average across the nation except across the Northern Rockies where above average amounts were received. While the trend continued into January in most areas, it was not as pronounced except across the southern Great Plains where a large area of 25% or less precipitation was received. In contrast, the northern Great Plains and Upper Midwest began to show a trend toward above average precipitation as the frequency of the passage of Arctic cold fronts and Alberta Clippers increased. Mounting precipitation deficits across California and Oregon were beginning to show negative impacts in soil moisture data. Drought expansion and intensification was observed across both states. By February, a very moist pattern had become established over a majority of the East. Rainfall amounts along the Mississippi River Valley were greater than 200% of average and produced localized flooding. However, along the southern Atlantic Coastline increases in fire activity were observed. This was due to a persistent drier than average pattern that kept rainfall amounts received in this area around 50% of average.

Mountain snowpack at the end of the period was above average along the Canadian Border and across the Northern Rockies. Amounts across the Great Basin, California, and the Southwest were generally much less than 50% of average. The northern Sierra did see some relief in February while the Southern Cascades and Siskiyous did not. While Alaska experienced a warmer than average winter, the above average precipitation amounts received across the Interior produced an above average snowpack.

Spring (March – May)

A persistent, broad, and deep upper level trough of low pressure redeveloped over the eastern two thirds of the country in March and April while a strengthening ridge of high pressure developed over the West. Temperatures across the northern Great Plains and upper Midwest were less than 10 degrees below average for weeks on end. Elsewhere across the Great Plains and the East, temperatures were 2 to 4 degrees below average. In the West, temperatures were generally average to 4 degrees above average both months. In May, the highly amplified atmospheric pattern began to flatten into more of a westerly flow. This promoted temperatures that were generally above to near average.

Drier than average conditions continued across Southern California and the Southwest in March and April. A northward expansion of the conditions into Oregon and Washington occurred in May. Drought in these areas continued to intensify and expand in coverage. Elsewhere across the country, precipitation totals began to trend toward drier than average conditions in April and May except across the Southeastern and Mid-Atlantic States where amounts received both months were in the 130% to 300% of average range. By May, the residual drought conditions across the Carolinas, Georgia, and Florida had been largely alleviated.

The snow year ended as it began with average to above average amounts received across Washington State and the Northern Rockies and below average amounts received across Oregon, the Great Basin, and the southwestern states. While above average temperatures allowed for a normal loss of the snowpack, the pattern remained wet. This prevented an early start to the Alaskan fire season.

Summer (June – August)

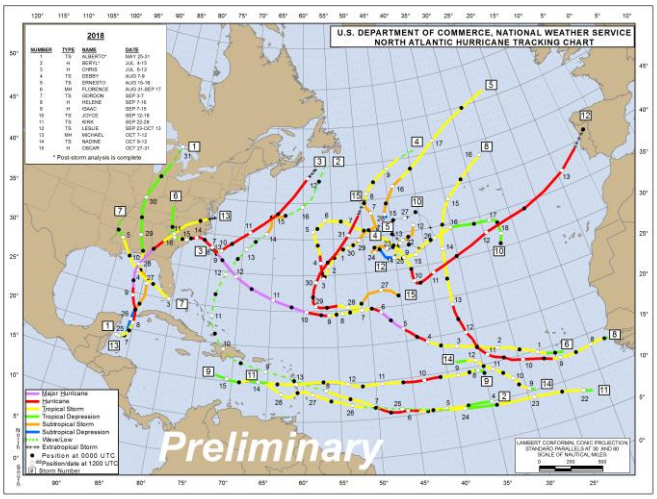
The summer of 2018 largely followed expected climatological patterns typically observed during the period across the country. A series of high pressure ridge events brought increasing heat and dryness to the West and allowed for drought conditions to intensify and expand north of the Four Corners Region and also across the Pacific Northwest. In the East, southeastward moving cold fronts stalled over the Deep South and continued to produce ample rainfall. This kept drought conditions from returning except across Texas where persistently dry conditions allowed for a gradual emergence of drought conditions. What was atypical was an early arrival of moisture into the Southwest during the last week of June as the remnants of Tropical Storm Bud moved northeast across Arizona and New Mexico.

Temperatures across the country were generally average to 4 degrees above average for the summer except across the Northern Rockies and the northern Great Plains where they were 1 to 2 degrees below average. Despite the overall near average conditions observed, there were isolated events of record setting heat during August. Some areas across the northwestern portion of the country observed near all-time record high temperatures during late August. Alaska continued to experience above average temperatures, but the wet pattern persisted.

A very active southwestern monsoon began the first week of July across the Four Corner States and intermittently across Southern California and persisted through much of August. The previously drier than average signal observed in these areas shifted north into the Great Basin, northern California, Pacific Northwest, and somewhat into the Northern Rockies by mid-July. Drought conditions in these areas continued to slowly expand and intensify. The heavy grass crop across California and the Great Basin cured and dried by mid-month and the developing drought allowed for the timber in these areas to become critically dry by late in the month. The abnormally dry conditions across Texas continued until early August when monsoonal and other tropical moisture began to feed into the state eventually reducing the potential for large fire development.

Autumn (September – December)

The active western fire season continued well into September before a series of passing weak weather systems began to supply enough moisture to gradually reduce large fire potential and activity. Never-the-less, precipitation amounts received in September were below average across the West. In the East, amounts were generally above average. Some improvement in precipitation totals was observed in October and November as the seasonal transition to winter began. Amounts across the country began to trend toward above average except across most of California, western Oregon, and western Washington. The ongoing drought in these areas persisted and fuels remained critically dry, especially across portions of central and southern California. During a foehn wind event on November 8, the Camp Fire occurred. Over a short period of time, the fire consumed more than 153,000 acres, destroyed the town of Paradise, California, and killed 85 individuals. This was the deadliest fire in more than 100 years. Spread rates of 80 acres per minute were observed at the fire's peak.



While temperatures along the West Coast were above average, elsewhere across the nation they were near average during the period. There were a few exceptions. The northern Great Plains experienced temperatures that were 6 degrees below average or more, and areas along the Gulf Coast experienced temperatures that were nearly 4 degrees above average.

As the decline in fire potential was beginning, the tropical season began to reach it's peak. Hurricane Florence made landfall on September 15 near Wilmington, North Carolina producing winds up to 106 mph, storm surge of 9 to 13 feet, and nearly three feet of rainfall. Flooding was catastrophic. Hurricane Michael made landfall near Panama City, Florida on October 10. The nearby community of Mexico Beach was decimated as the 155 mph winds associated with the Category 4 storm leveled the community. The storm was the strongest to make landfall since 1992's Hurricane Andrew. Hawaii also experienced flooding and wind impacts from a pair of tropical storms as did the Southeast from an additional two tropical systems that made landfall during the late summer and early autumn months. Counting both the Atlantic and Eastern Pacific Basins, there were a total of 11 major hurricanes in 2018.

As late November progressed into December, the end of the calendar year began to demonstrate conditions typically observed with the emergence of a weak El Niño. Generally, wetter than average conditions developed across most of the Southeast and across California. Drier than average conditions developed across the northwestern quarter of the country. Early season snowpack accrual in the northwest started out at a much slower than average rate. This was expected. Of surprise was the reemergence of drier than average conditions across the Four Corners Region and across southern Florida. These areas will need to be monitored closely entering 2019.

National Fire Activity Synopsis

The 2018 fire season was below normal for number of reported wildfires (84 percent of the 10-year annual average). There were 58,083 wildfires reported nationally (compared to 71,499 wildfires reported in 2017). The number of acres burned was above normal in 2018 (132 percent of the 10-year average). Wildfires consumed 8,767,492 acres reported nationally (compared to 10,026,086 acres reported in 2017). For the second year in a row, the Great Basin Area led the nation with almost 2.1 million acres burned (233 percent of its 10-year average).

Based on an annual 10-year average, Northwest (115%), Southwest (111%) and Great Basin (109%) reported about average fire occurrences in 2018. Southern California (99%) and Northern Rockies (97%) experienced near average fire occurrence. Northern California (89%), Southern Area (81%), Rocky Mountain (80%), Alaska (71%) and Eastern (63%) experienced below average fire occurrences.

Based on an annual 10-year average, Northern California (385%), Great Basin (233%), Rocky Mountain (179%), Northwest (177%) Southern California (118%) and Southern Area (116%) all experienced above average acres burned within their respective Geographic Areas. The Southwest (87%), Eastern (49%), Alaska (33%) and Northern Rockies (30%) saw below average acres burned. Forty-nine fires and complexes exceeded 40,000 acres in 2018; five more than in 2017 (see Significant Fire Activity below for a list of those fires).

A total of 25,790 structures were destroyed by wildfires in 2018, including 18,137 residences, 6,927 minor structures, and 229 commercial/mixed residential structures. This is well above the annual average of 2,701 residences, 1,379 minor structures, and 64 commercial/mixed residential structures destroyed by wildfire with this year ranking 1st (and more than double the previous record) in total structures lost (data from 1999 to present). California accounted for the highest number of structures lost in one state in 2018: 17,133 residences, 703 commercial/mixed residential structures and 5,811 minor structures. Utah was second with 77 residences and 377 minor structures lost.

Requests for firefighting resources placed to the National Interagency Coordination Center during the 2018 fire season were higher than the 10-year average in most categories. Filled requests for crews, engines, overhead, and heavy air tankers exceeded their respective 10-year averages. Helicopter mobilizations were slightly below the 10-year average.

National Type 1 teams were mobilized 47 times (down from 55 in 2017), and spent 658 days on assignments (down from 829 days in 2017). All 16 national teams had between one and four assignments each. Type 2 Teams were mobilized 107 times (down from 137 in 2017), for a total of 1,403 days assigned to incidents (down from 1,873 days in 2017). Area Command teams were mobilized zero times (down from 4 assignments in 2017). National Incident Management Organizations (NIMO) mobilized 5 times in 2017 to both wildland fire and non-fire incidents (down from 8 times in 2017).

Military and International Resource Mobilizations

Military: On July 2nd , two MAFFS units were activated through a Request for Assistance (RFA) to the Department of Defense. This request was filled with two MAFFS from the 302nd Airlift Wing and were positioned in Colorado Springs, CO in support of wildland fire operations. On July 5th one MAFFS from the 153rd Airlift Wing and one MAFFS from the 152nd Airlift Wing were positioned at Colorado Springs, CO in support of wildland fire operations. On July 10th the two MAFFS from the 302nd Airlift Wing were released back to the DOD. On July 13th one MAFFS each from the 153rd and 152nd Airlift Wing were released back to the DOD. On July 26th, two MAFFS from the 146th Airlift Wing were deployed to McClellan Airfield, CA in support of wildland fire operations. On August 1st, two additional MAFFS from the 152nd Airlift Wing were deployed to McClellan Airfield, CA. On August 23rd one MAFFS unit from 16th Airlift Wing was released back to the DOD. On August 25th another MAFFS unit from the 146th Airlift Wing was released back to the DOD. On August 26th the remaining two MAFFS units from the 152nd Airlift Wing were released back to the DOD.

MAFFS units primarily provided retardant delivery to the Rocky Mountain, Northern and Southern California Geographic Areas while employed from July 2nd through August 26th. These units delivered a total of 643,579 gallons of retardant while conducting 233 sorties. This is down from 2017 when 293 sorties were flown delivering 820,115 gallons of retardant.

On July 23rd, one RC-26 aircraft with Distributed Real-Time Infrared (DRTI) capability and support personnel from the 141st Aerial Refueling Wing (Washington Air National Guard) was deployed to Fairchild AFB (Spokane, WA) in support of wildland fire operations. This aircraft provided incident awareness and assessment through infrared sensing capability to wildland fire incident management personnel until released on September 5th.

On August 13th, two hundred and thirty-three soldiers from the 14th Brigade Engineer Battalion based out of Joint Base Lewis-McChord, Washington were deployed in support of the Mendocino Complex in northern California. They were released back to Joint Base Lewis-McChord on September 5th.

International: On July 17th through the NIFC-CIFFC Agreement the United States provided twelve firefighters to Ontario, Canada. On July 31st all twelve firefighters were released back to the United States.

On August 6th through the NIFC-Australia and NIFC-New Zealand Agreement, one hundred thirty-eight fire line personnel were assigned to fires in the Northern California and Northwest Geographic Areas. On September 5th all personnel from Australia and New Zealand were released back to their respective countries.

Significant Wildland Fires

Fires and Complexes Over 40,000 Acres in 2018

NAME	GACC	State	Start Date	Contain or Last report date	Size (Acres)	Cause	Estimated Cost
Mendocino Complex	NO	CA	7/27	9/18	459,123	U	220,000,000
Martin	GB	NV	7/5	7/21	435,569	U	10,000,000
Rhea	SA	OK	4/12	4/26	286,196	U	3,800,000
South Sugarloaf	GB	NV	8/17	10/10	233,458	L	20,000,000
Carr	NO	CA	7/23	8/30	229,651	U	162,289,294
Klondike	NW	OR	7/15	11/28	175,258	L	104,500,000
Camp	NO	CA	11/8	11/25	153,336	U	120,000,000
Goose Creek	GB	NV	7/26	8/10	132,220	U	7,850,000
Spring Creek	RM	CO	6/27	9/6	108,045	H	35,000,000
Pole Creek	GB	UT	9/6	10/8	102,191	L	29,100,000
Boxcar	NW	OR	6/21	7/3	100,207	U	3,500,000
Grassy Ridge	GB	ID	7/26	8/15	99,502	L	3,000,000
Woolsey	SO	CA	11/8	11/27	96,949	U	56,943,320
Ferguson	SO	CA	7/13	8/23	96,901	U	150,000,000
County	NO	CA	6/30	7/14	90,288	U	47,000,000
Avian Complex	SA	FL	5/1	5/29	82,461	U	10,781,364
Substation 0730 RN	NW	OR	7/17	8/2	78,425	H	4,200,000
Grass Valley	NW	WA	8/11	8/15	75,573	U	875,000
Mallard	SA	TX	5/8	5/20	75,530	U	NR
Boylston	NW	WA	7/19	7/23	71,200	U	995,000
Dollar Ridge	GB	UT	7/1	8/29	70,003	U	22,000,000
Zitziana River	AK	AK	6/4	9/7	69,332	L	2,440,527
Sharps	GB	ID	7/29	9/13	64,853	H	9,500,000
Delta	NO	CA	9/5	10/7	63,311	H	64,429,020
34 Complex	SA	OK	4/12	4/24	62,481	OT	3,143,000
Buzzard	SA	FL	4/10	5/1	62,404	L	10,419,127
Bruneau	GB	ID	7/24	7/28	61,691	L	1,750,000
OK Bar	SW	NM	4/22	5/13	61,620	L	1,400,000
Roosevelt	GB	WY	9/15	10/6	61,511	U	30,000,000
Sheep Creek	GB	NV	8/18	8/26	59,789	U	3,000,000
Watson Creek	NW	OR	8/15	9/9	59,061	U	19,139,000
Crescent Mountain	NW	WA	7/29	11/28	56,609	U	40,705,00
Miles	NW	OR	7/16	10/17	54,334	L	2,000,000
Stubblefield 1008	NW	OR	8/17	9/20	54,221	L	2,200,000
416	RM	CO	6/1	7/31	54,129	U	39,541,000

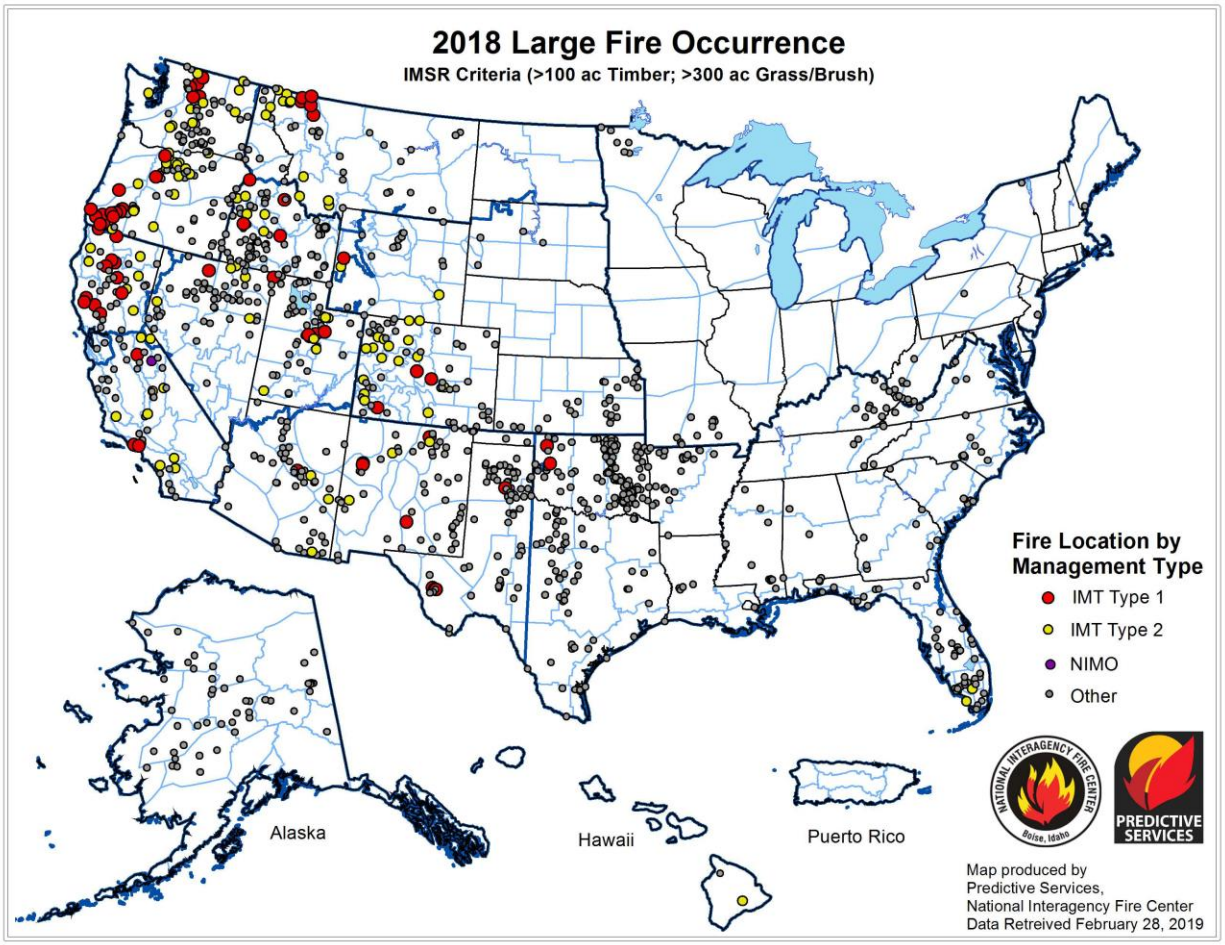
NAME	GACC	State	Start Date	Contain or Last report date	Size (Acres)	Cause	Estimated Cost
Mooseheart	AK	AK	6/7	7/5	53,643	L	10,000
Taylor Creek	NW	OR	7/15	10/11	52,839	L	24,077,000
Perry	GB	NV	7/27	8/6	51,400	U	4,950,000
Badger Hole	RM	CO	4/17	4/22	50,671	H	131,444
Buzzard	SW	NM	5/22	7/12	50,296	U	15,100,000
RIVER	NO	CA	7/27	7/30	48,920	U	NR
HIRZ	NO	CA	8/9	9/14	46,150	H	55,511,216
Jennies Peak 1039 RN	NW	OR	8/17	9/20	45,956	L	1,400,000
Dulby Hot Springs	AK	AK	6/6	9/1	44,364	L	40,000
206	SW	NM	4/12	4/14	44,162	U	96,000
MM 117	RM	CO	4/17	4/20	42,795	H	775,000
Cougar Creek	NW	WA	7/28	11/8	42,712	L	42,165,000
Terek	RM	WY	7/8	7/13	42,267	L	890,000

L – Lightning H – Human U – Unknown/Under Investigation OT - Other NR – Not Reported

Information in the above table was derived from ICS-209 reports submitted in the Fire and Aviation Management Web Applications system (FAMWEB). Information shown may not reflect final official figures.

Significant Fire Activity

There were 1,167 large or significant wildfires and complexes reported in 2018 (derived from ICS-209 reports submitted through FAMWEB). Significant wildfires represented about 2 percent of total wildfires reported nationally in 2018. The maps below depict the locations of these fires.



Significant Fire Activity

Significant fires are defined in the National Mobilization Guide as fires that are a minimum of 100 acres in timber fuel types, 300 acres in grass and brush fuel types, or are managed by a Type 1 or 2 Incident Management Team, WFMT or NIMO.

Percent of Reported Significant Fires by Geographic Area

AK	NW	NO	SO	NR	GB	SW	RM	EA	SA
4%	11%	4%	4%	4%	16%	9%	9%	3%	36%